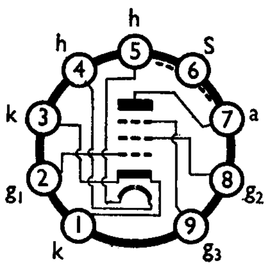
MINIATURE R. F. PENTODE 6.3V INDIRECTLY HEATED	**Z719** **MARCH, 1954**

A High Slope RF Pentode with High Input Impedance at radio frequencies.

BASE CONNECTIONS AND VALVE DIMENSIONS

Base: B9A
Bulb: Tubular



View from underside of base.

Max. overall length: 67·5 mm.
Max. seated length: 60·5 mm.
Max. diameter: 22·2 mm.

RATING

V_h	6·3		V
I_h	0·3	approx.	A
$V_{a(b)}$*	550	max.	V
V_a	300	max.	V
$V_{g2(b)}$*	550	max.	V
V_{g2}	300	max.	V
$v_{h\text{-}k}$	150	max.	V
p_a	2·5	max.	W
p_{g2}	0·7	max.	W
g_m at $V_a = V_{g2} = 170$, $I_a = 10mA$	7·4		mA/V
r_a at $V_a = V_{g2} = 170$, $I_a = 10mA$	0·4		MΩ
$\mu_{g1\text{-}g2}$ at $V_a = V_{g2} = 170$, $I_a = 10mA$	50		
$R_{eq.\ noise}$	1000		Ω
R_{in}†	14		kΩ
$c_{g1\text{-}k}$†	11·2		pF

* With $I_a = 0$, $I_{g2} = 0$.

† Taken at f = 45 Mc/s with both cathode tags strapped as in Fig. 1. A small variation in cathode wiring can alter the value of R_{in}.

CAPACITANCES (of an unscreened valve)

$c_{g\text{-}all}$ 7·5 pF $c_{a\text{-}all}$ 3·3 pF $c_{a\text{-}g1}$ 0·006 pF

MOUNTING

Any position.

SCREENING

A separate external screening canister should be used. The internal and external surfaces of the canister should be blackened.

RETAINING

It is recommended that a retaining device is used.

VENTILATION

The temperature of the hottest part of the bulb must not exceed 250°C.

MICROPHONY

This type is free from microphony in normal receiver application.

NOTE.— To obtain the values of R_{in} quoted, the above circuit must be used. The following points being important.

(1) Cathode pins 1 & 3 must be connected by a straight wire.
(2) All input circuit returns to be taken direct to one of these pins.
(3) All output circuit returns to be taken direct to the other pin.

Fixed bias is not important, and the values of C used must be large enough to give satisfactory de-coupling at the frequencies involved.

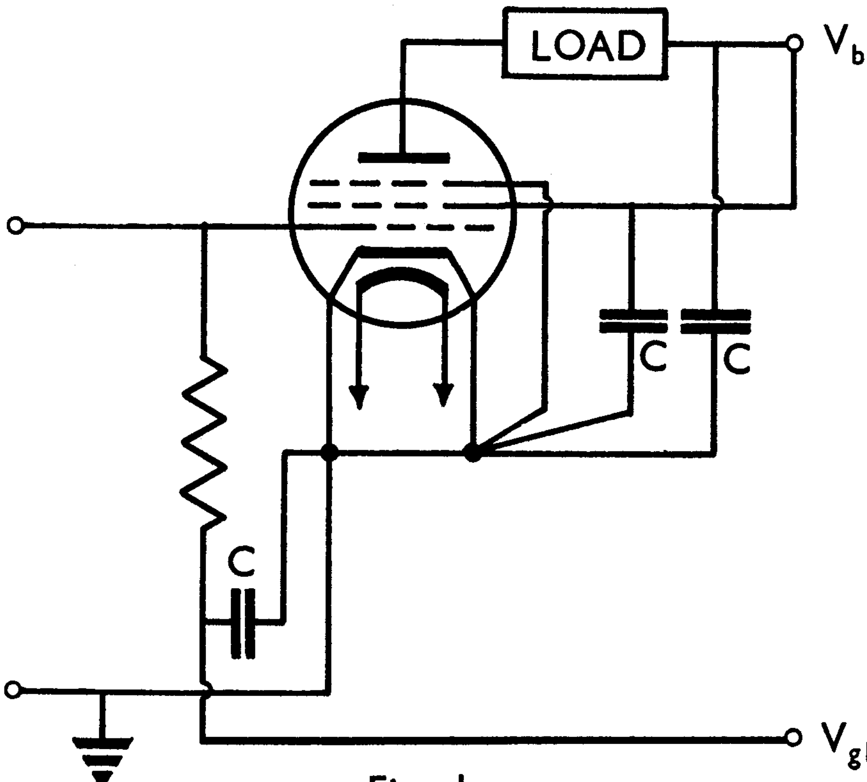
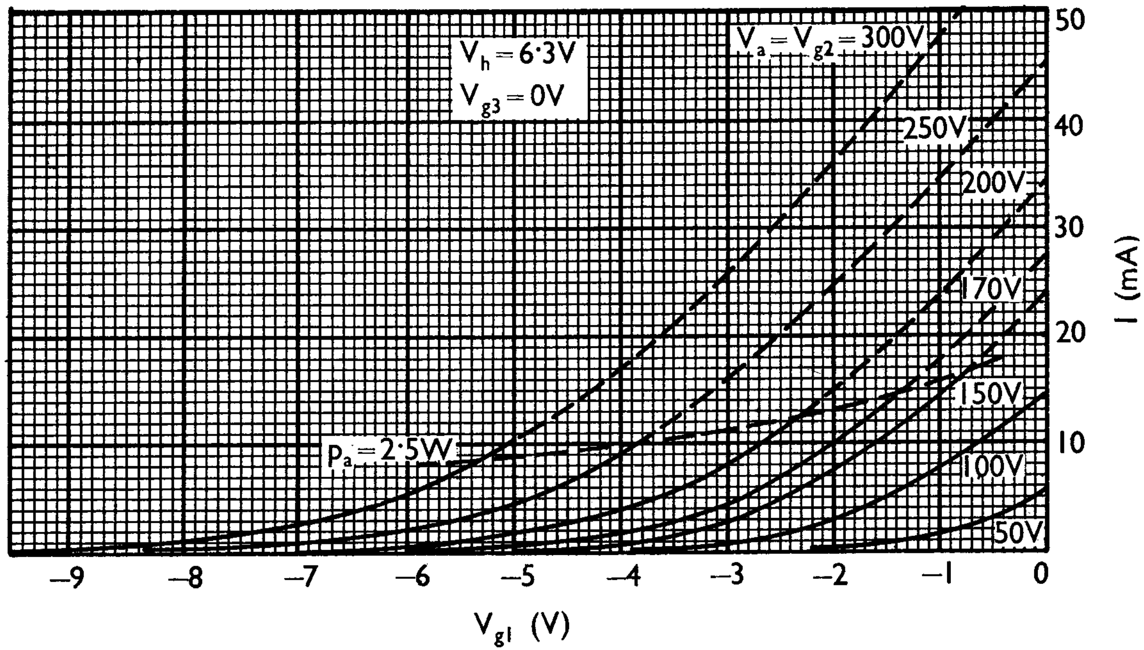
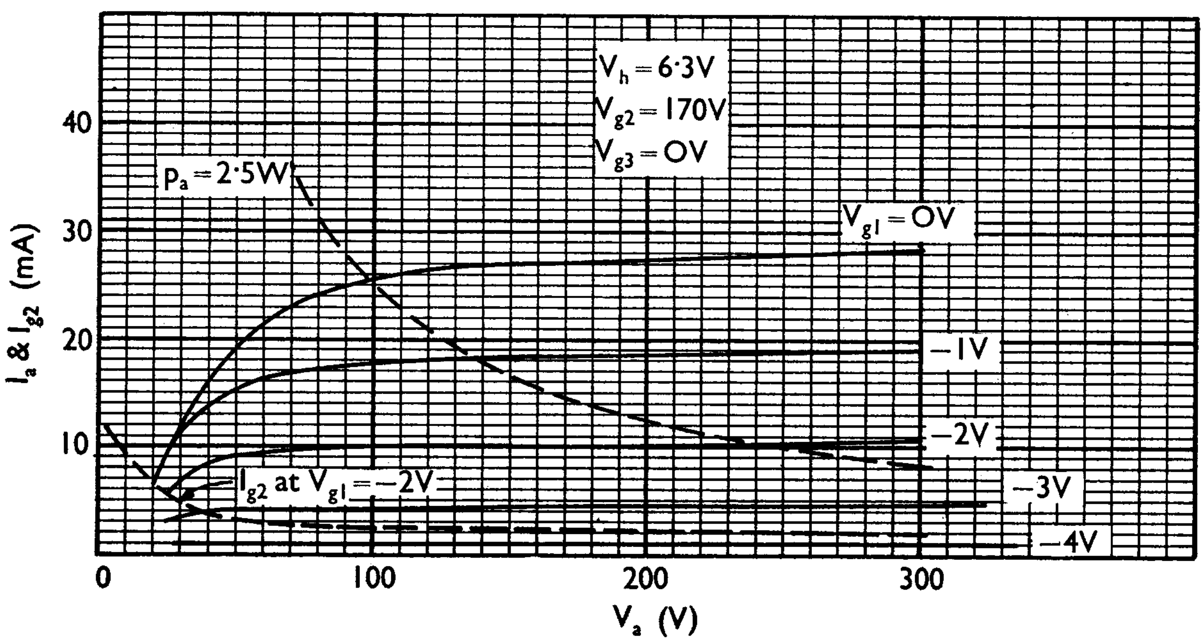


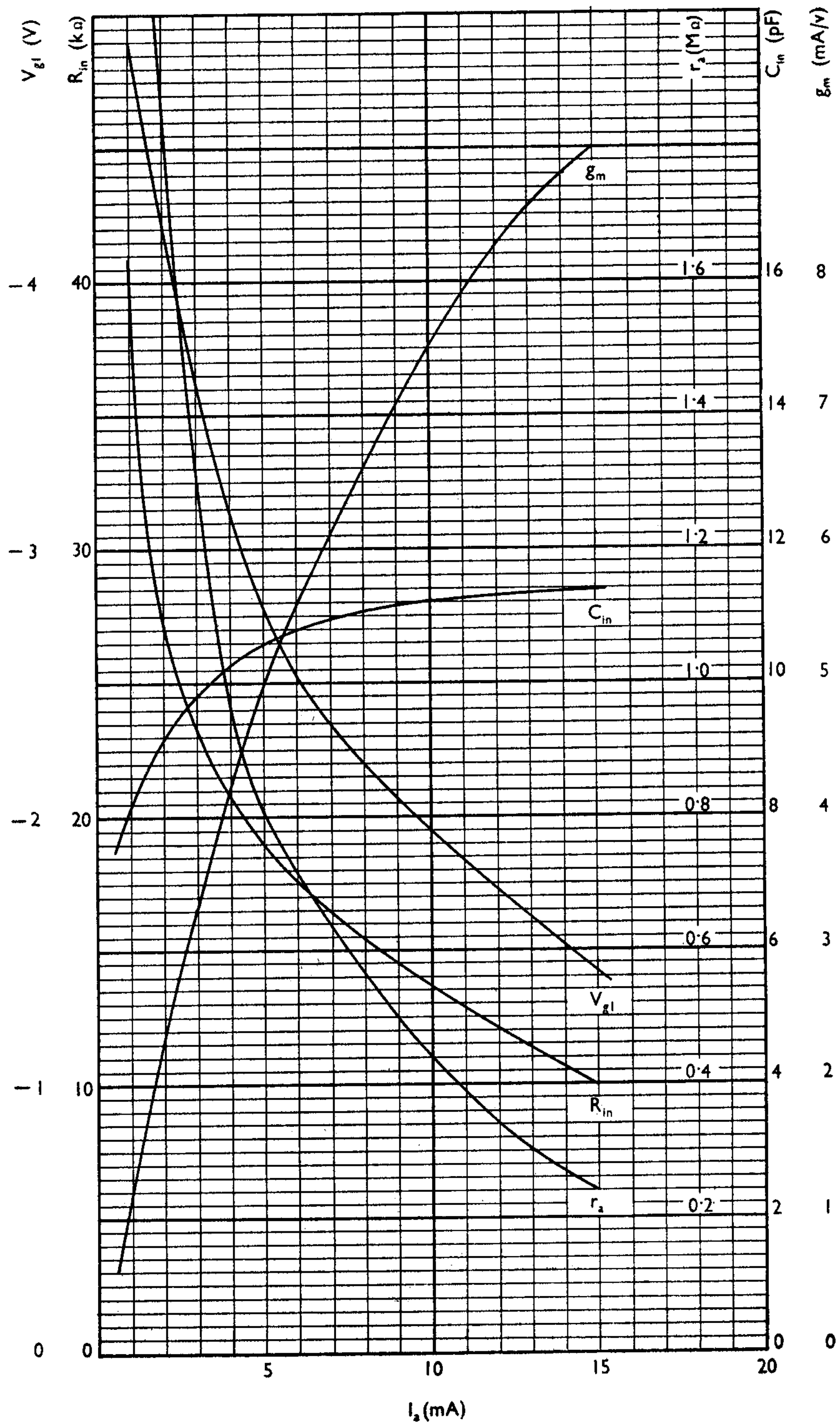
Fig. 1.



$V_h = 6{\cdot}3V$
$V_{g3} = 0V$
$V_a = V_{g2} = 300V$
250V
200V
170V
150V
100V
50V
$P_a = 2{\cdot}5W$
50
40
30
20
10
I (mA)
−9
−8
−7
−6
−5
−4
−3
−2
−1
0
V_{g1} (V)



V_h = 6·3V
V_g2 = 170V
V_g3 = OV
P_a = 2·5W
V_g1 = OV
−1V
−2V
−3V
−4V
I_g2 at V_g1 = −2V
40
30
20
10
I_a & I_g2 (mA)
0
100
200
300
V_a (V)



V_h = 6·3V V_a = 170V V_{g2} = 170V f = 45Mc/s

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